MISSOURI BOTANICAL GARDEN
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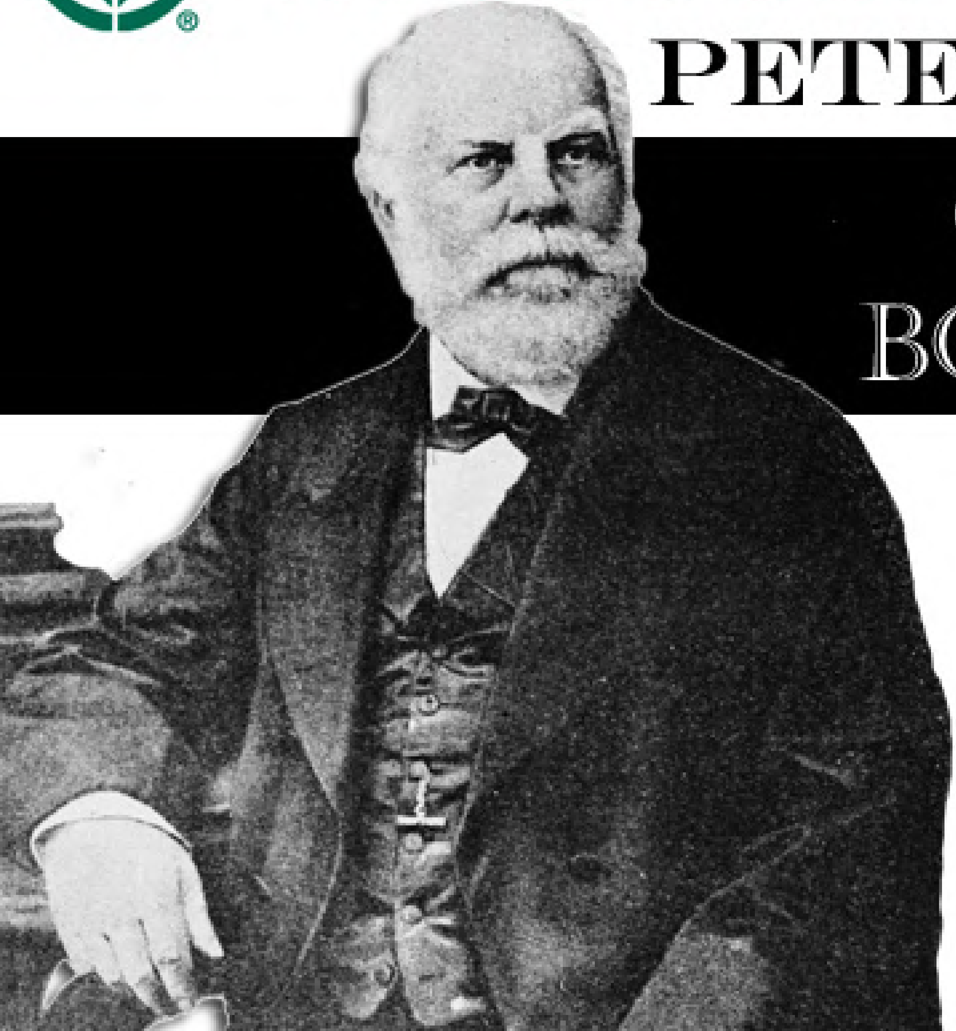

GEORGE ENGELMANN BOTANICAL NOTEBOOKS

Pagination Note:
Since many of the items lack a specific page number, the page number displayed online refers to the sequentially created number each item was given upon cataloging the materials.

Morphology [illegible]

[illegible]

up to July 1864

1844 – 1993 – [illegible]

Compositae

x Biology

Morphology x Flowers

10427

Myosotis arvensis Sibth.
Inc. M. litoralis M. B. Stev.
" arenaria Schrad.
" stricta Linn.

Spr I, 554
R II, 139

Europ. Asia Afr. Amer.

Fr 1825

0 1 2 3 4 5 6 7 8 9 10
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MISSOURI
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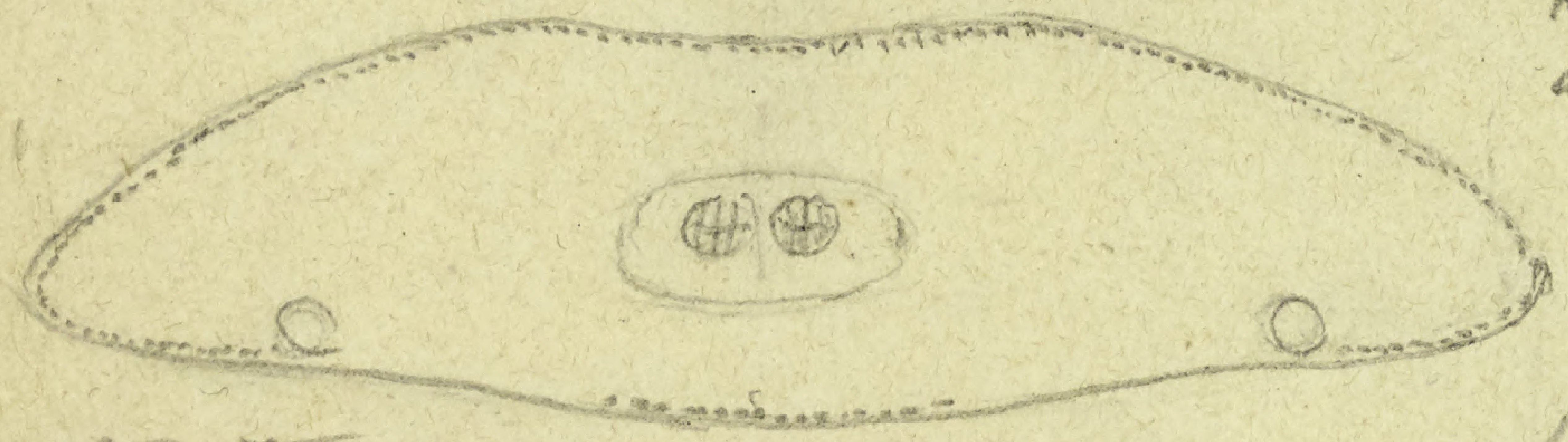
GARDEN

"Abies brachyphylla" Jan 13 1884

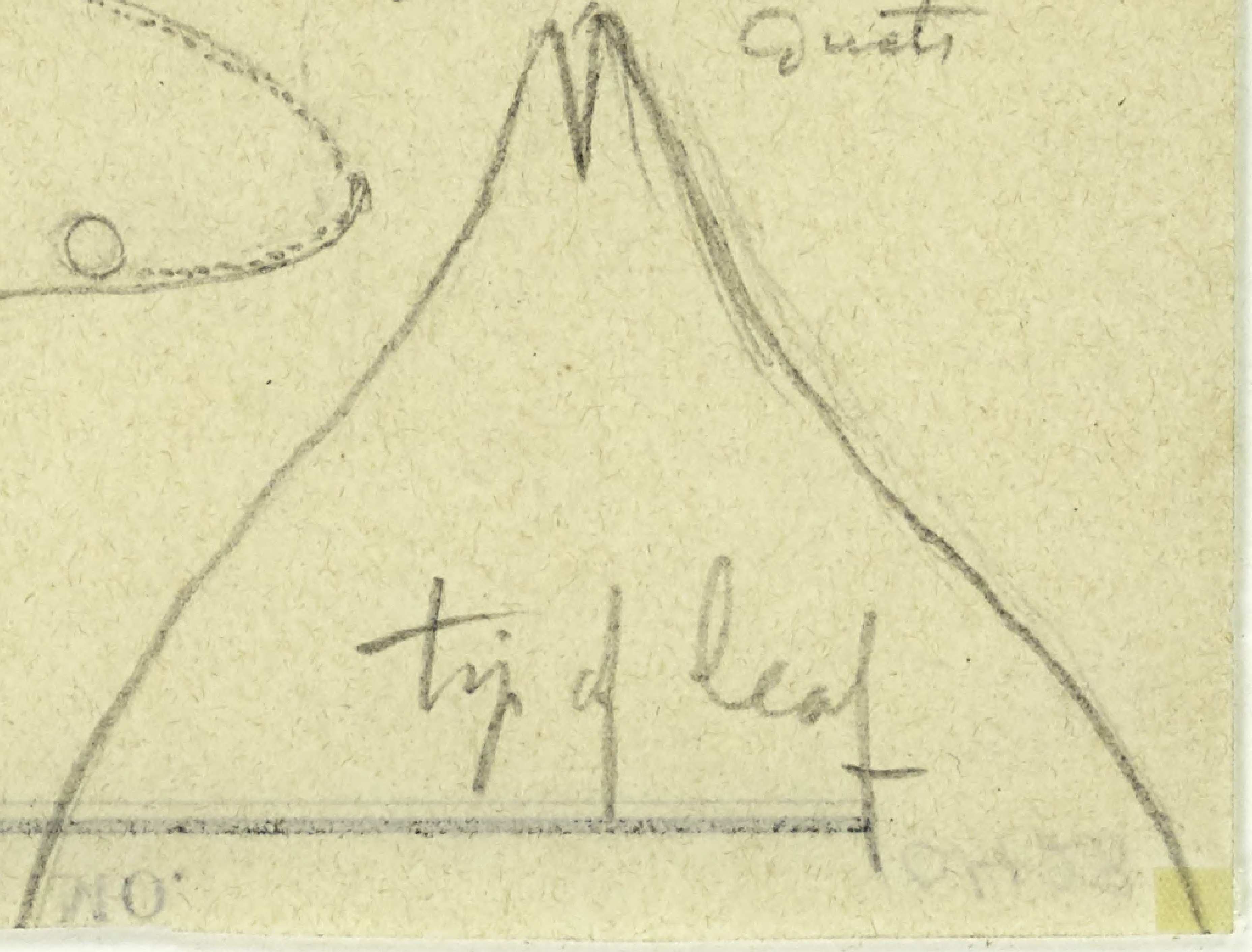
Bussey - Arboretum Sept 1883

x30



hypoderm continuous above and around to the ducts

no stomata above, about 10 series on each side below



tip of leaf

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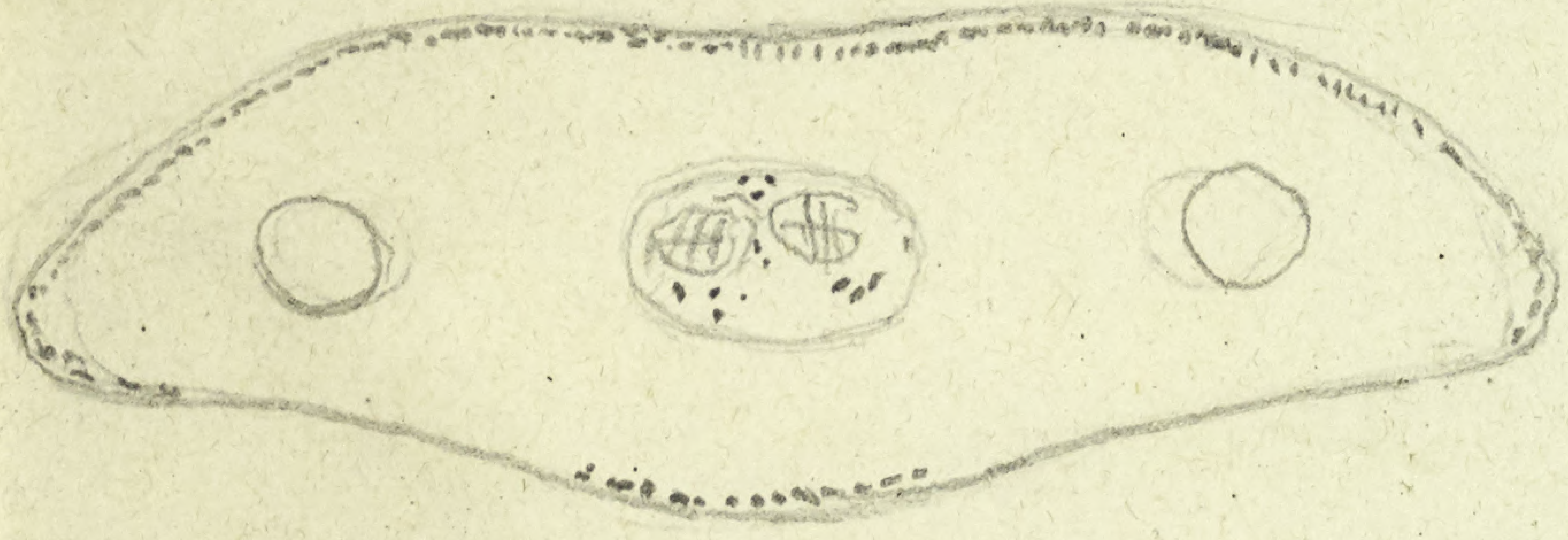
ST. LOUIS, MO.

10428

"Abies brachyphylla" Jan 13 1884

Sept 1883 Hort Sargent (in the woods)

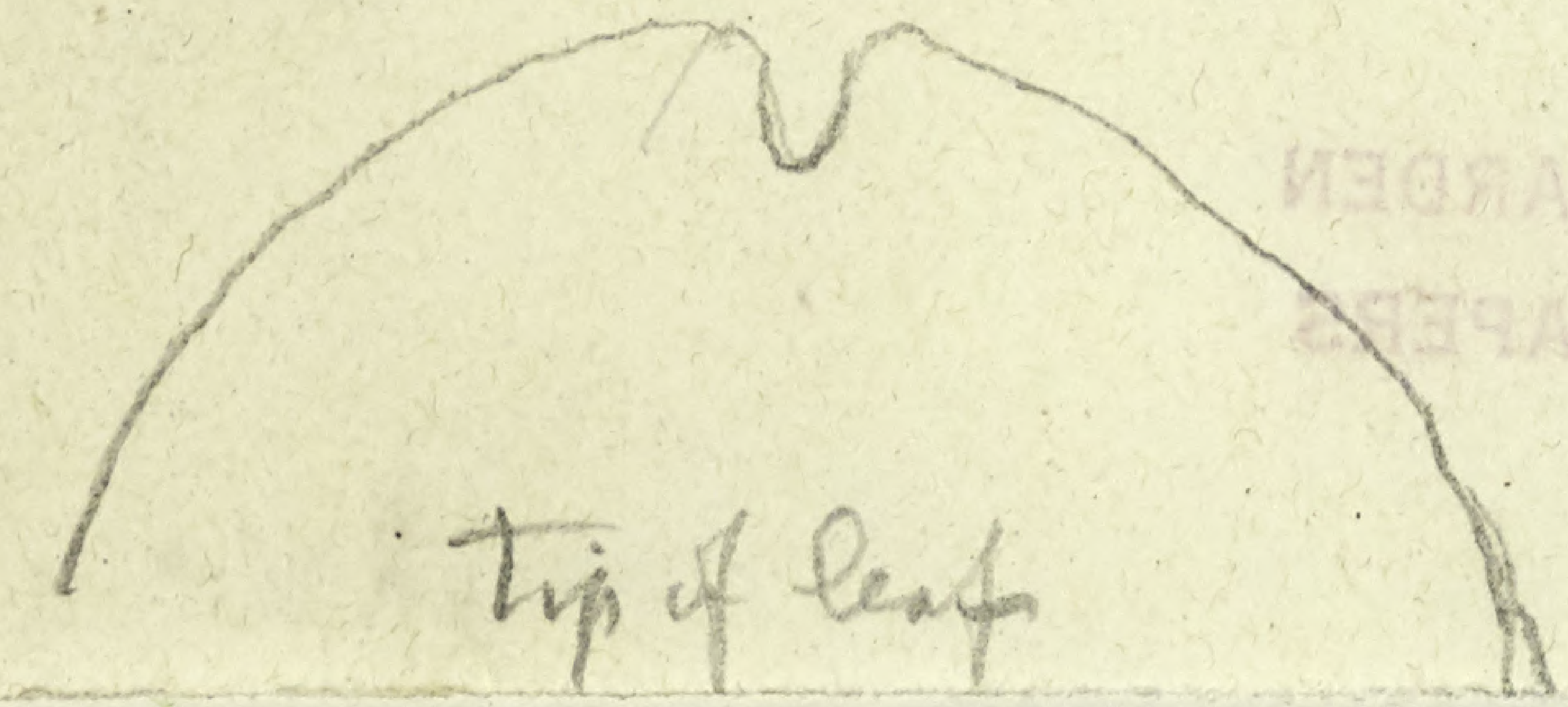
x30



hypoderm in one layer all over the upper surface and on keel and some near the vascular bundles

no stomata above

12-15 series on both sides below



Tip of leaf

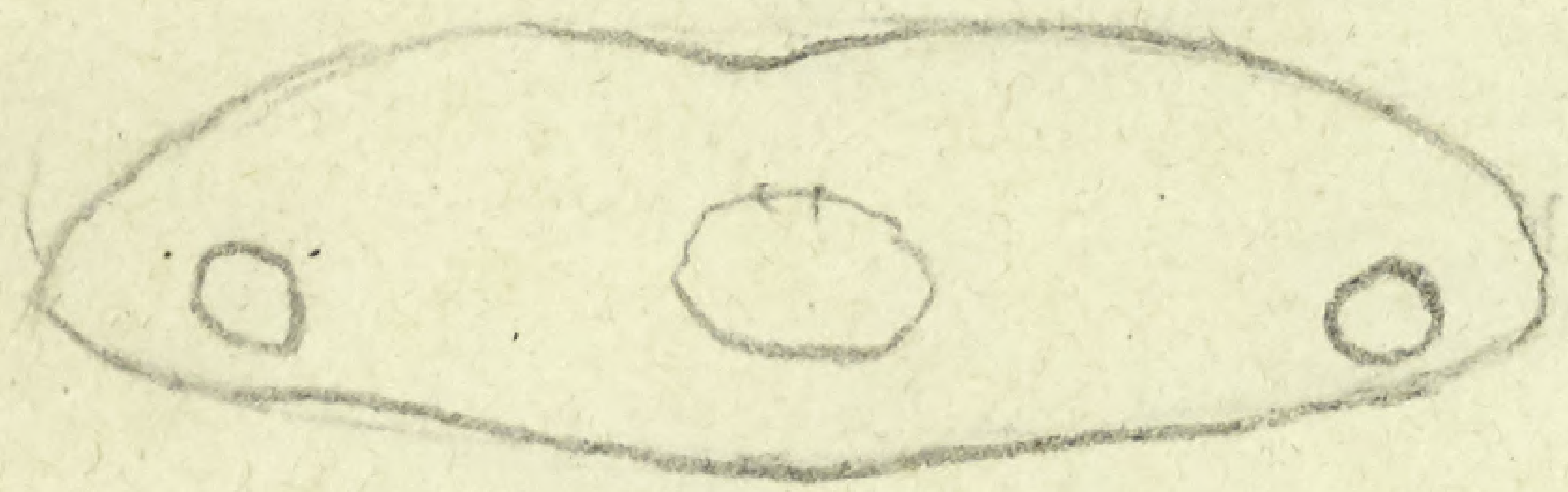
10429

Abies Sachalinensis Jan 13 1884

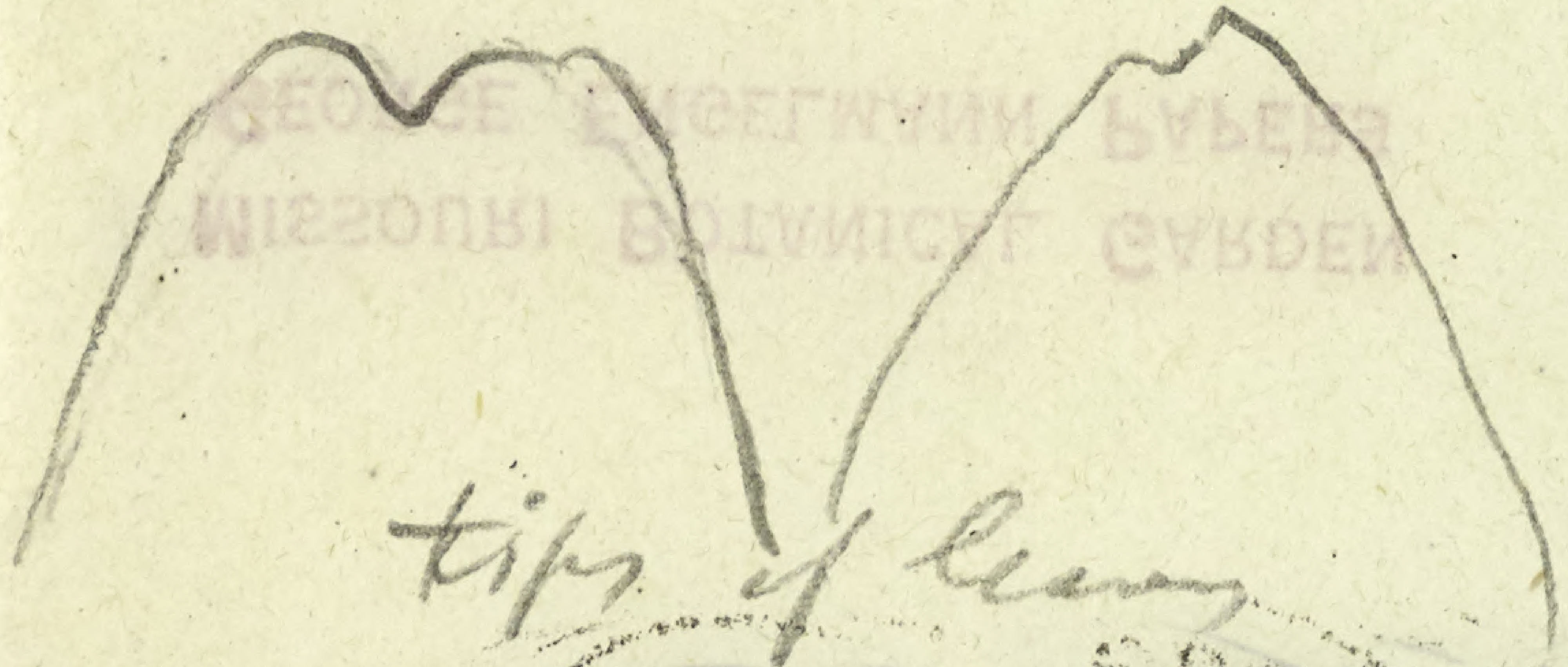
Bussy Arboret

Sept 1883

x30



no hypoderm
ducts close to epidermis
or a layer of parench.
cells between
no stomata on upper side
5–7 series on both
sides of lower side



tips of leaves

South-west Corner Fifth and Market Streets

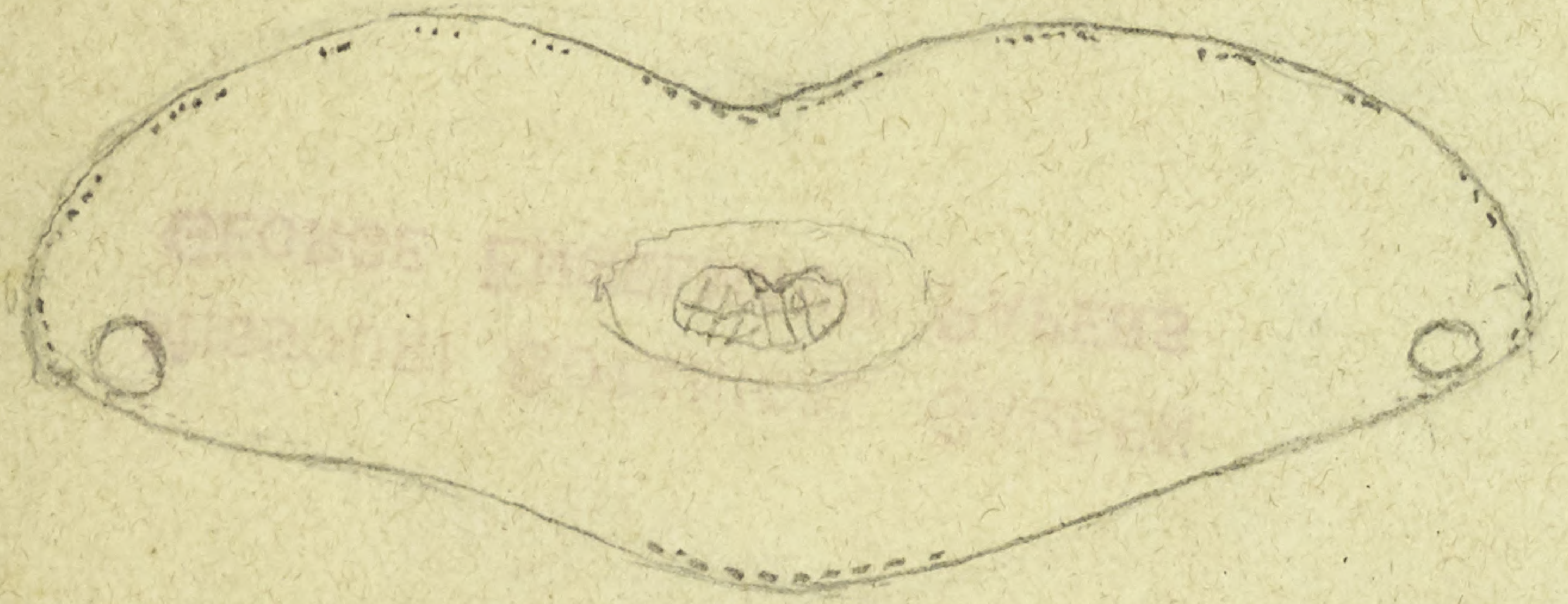
10430

Abies grandis

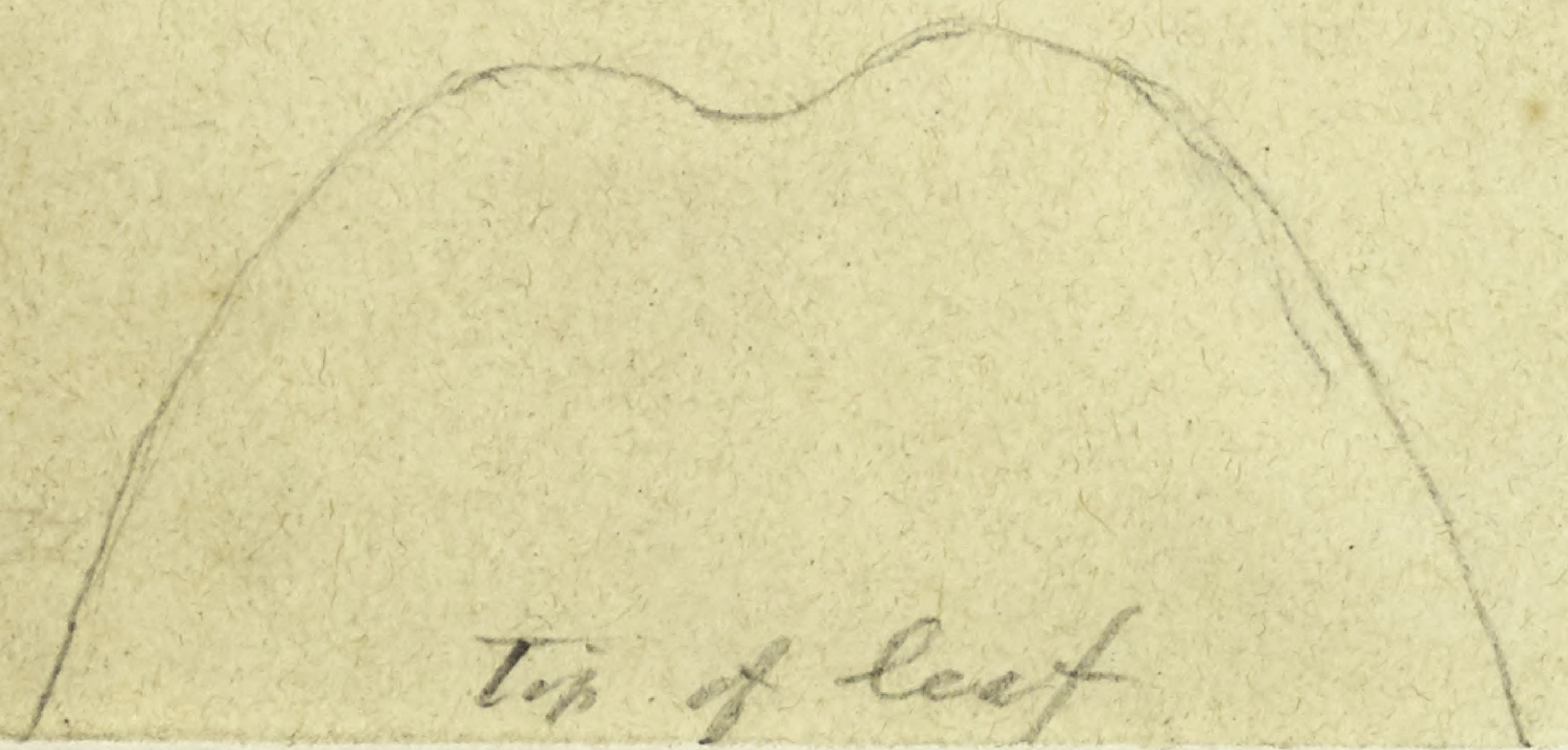
Jan 13 1884

x 30

mountains of Montana, Beaver creek
ex Herb Berolin
Krause leg
1882



no stomata on
upper side
at all
6-7 series on
each side below
hypodermis principally above
interrupted



Top of leaf

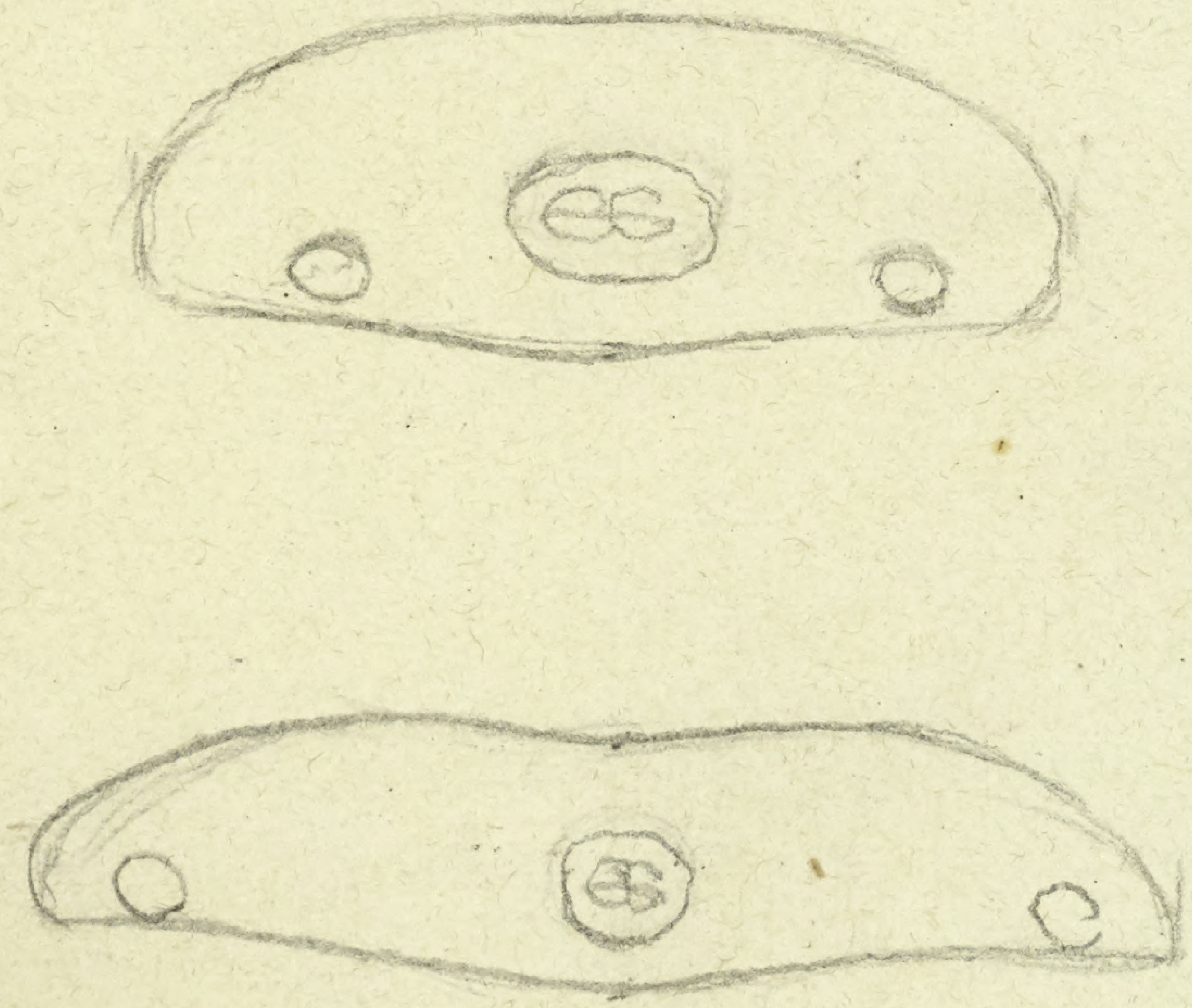
10431

Abies Metsu
Jesso Spruce

Jan 13 1884

Bussey Arboretum Sept 30 1883

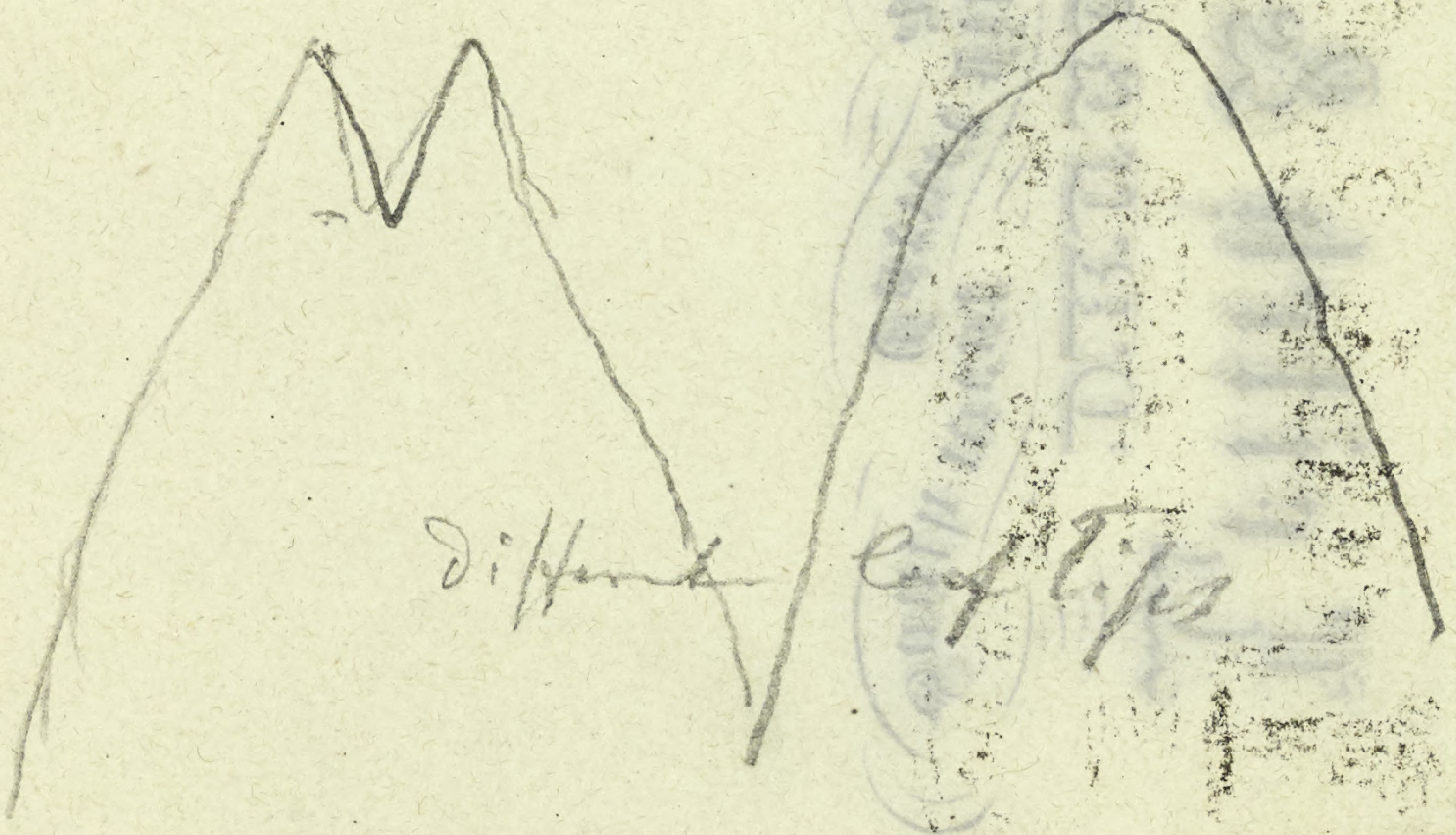
x 30



I can find no hypoderm cells at all

no stomata on upper side

5–6 series on each side below



different leaf tips

leaves of same branch

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10432

Leitch & Corliss
DRUGGISTS
South-west Corner Fifth and Market Streets

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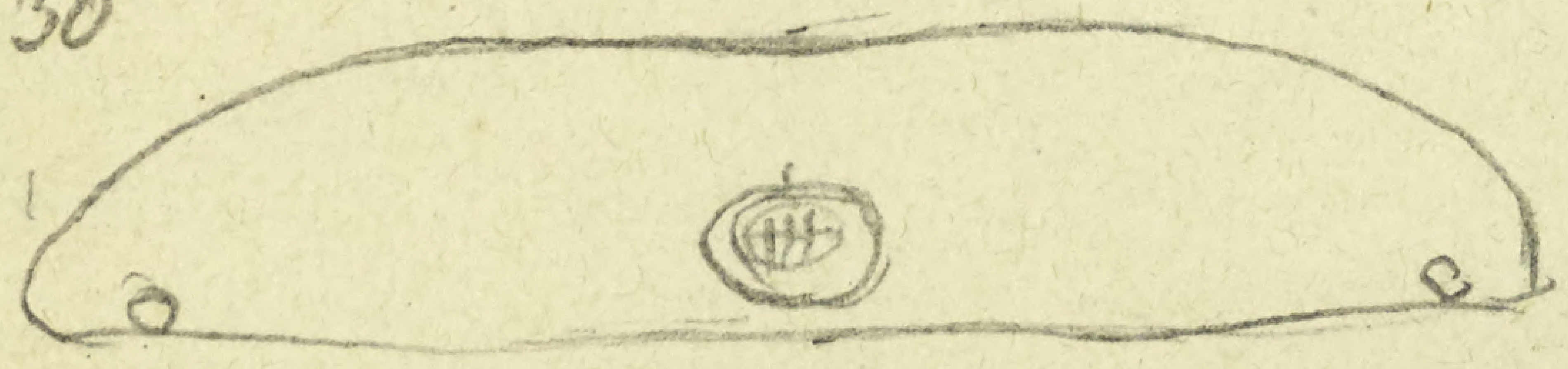
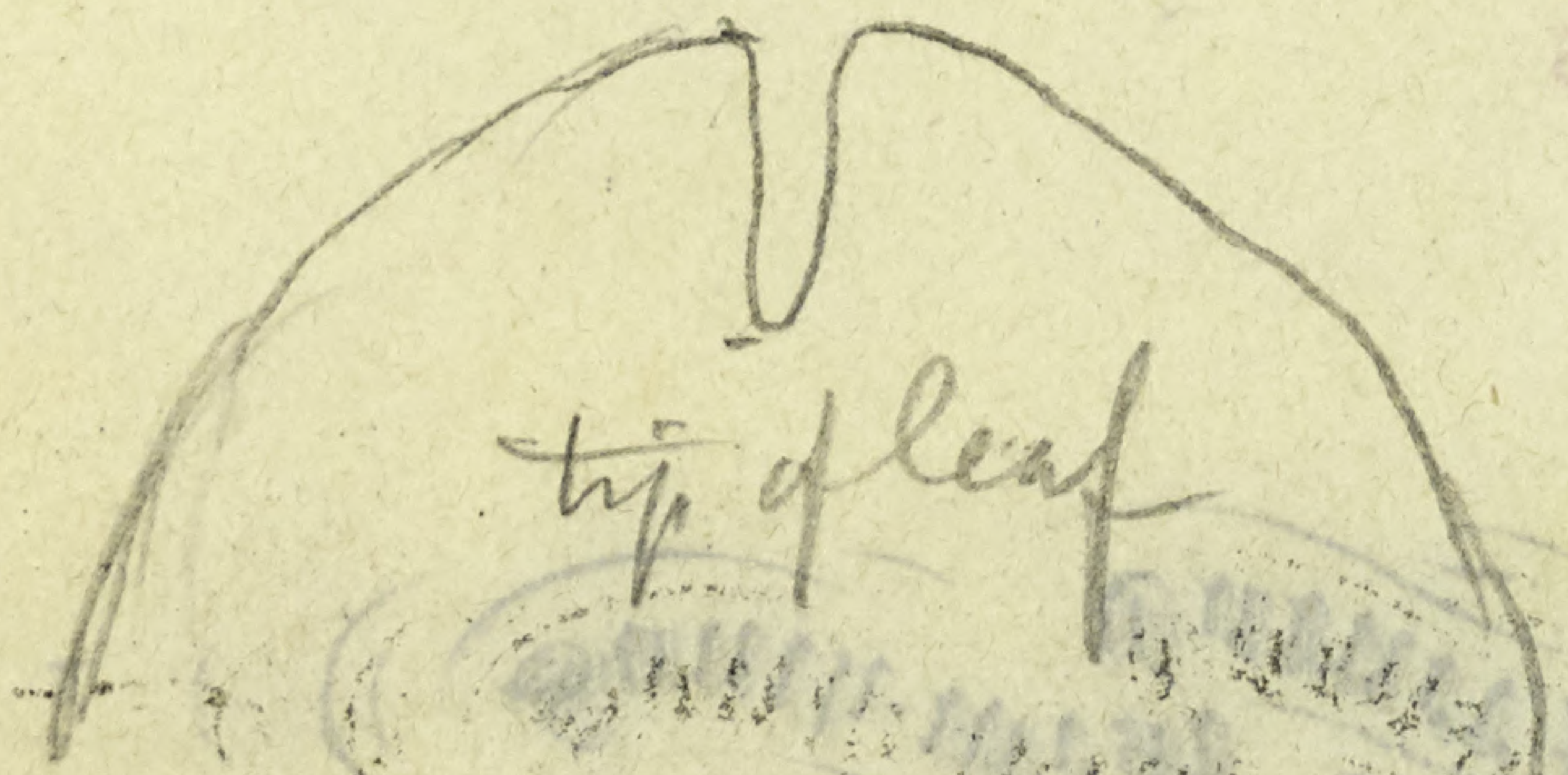
Abies Veitchii Jan 14 1884

Bussey arboretum ex Veitch! Sept 1883

x 30



no or only a few hypod
cells in angles
no stomata on upper
side, 6-7 series on
each side of lower
surface



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10433

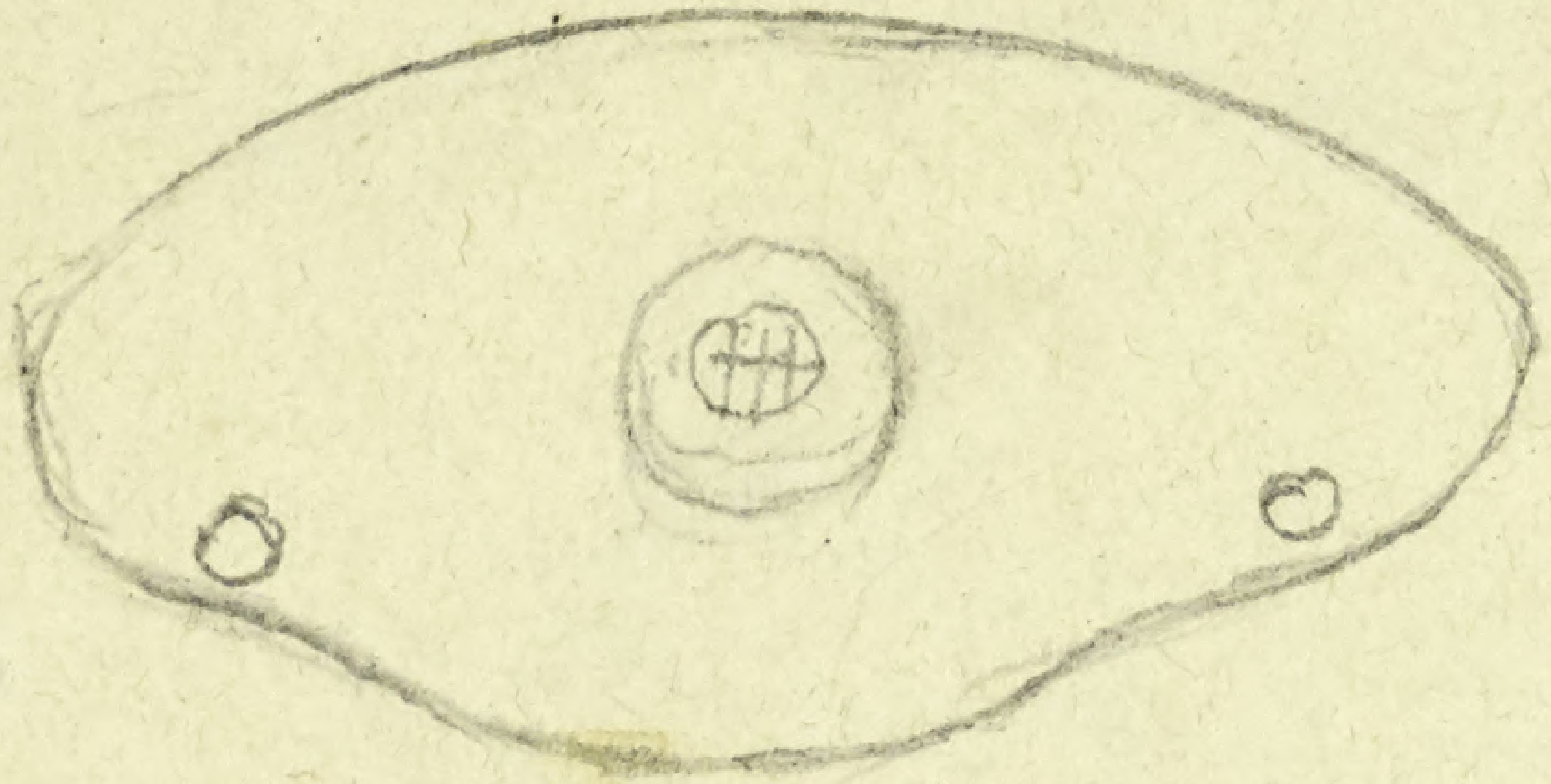
South-west Corner Fifth and Market Streets

DRUGGISTS

Picea Alcoquiana Jan 14 1884

Hort Sargent Sept 1883

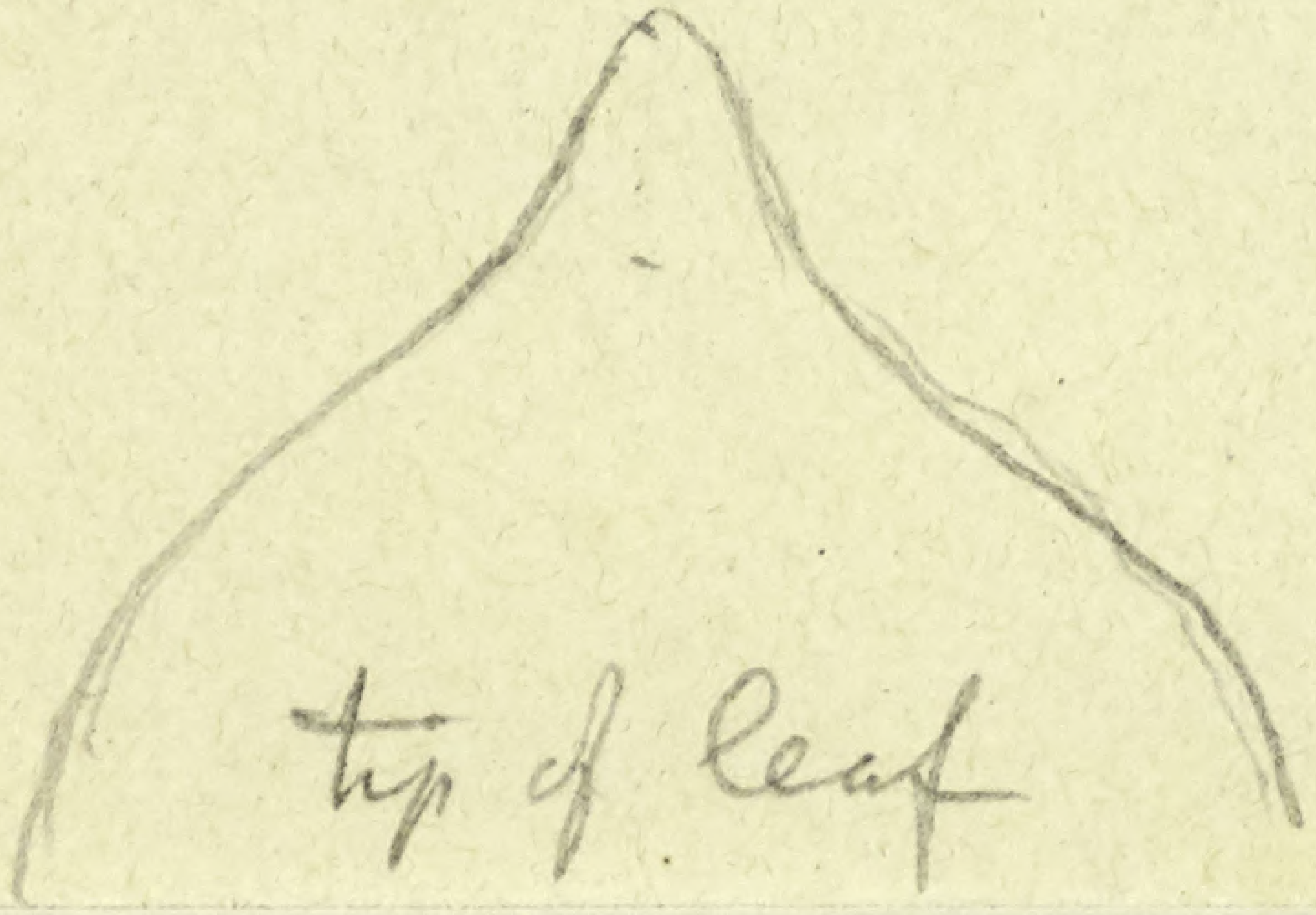
x 30



no stomata on lower side

6-7 series on each side above

no hypoderm



tip of leaf

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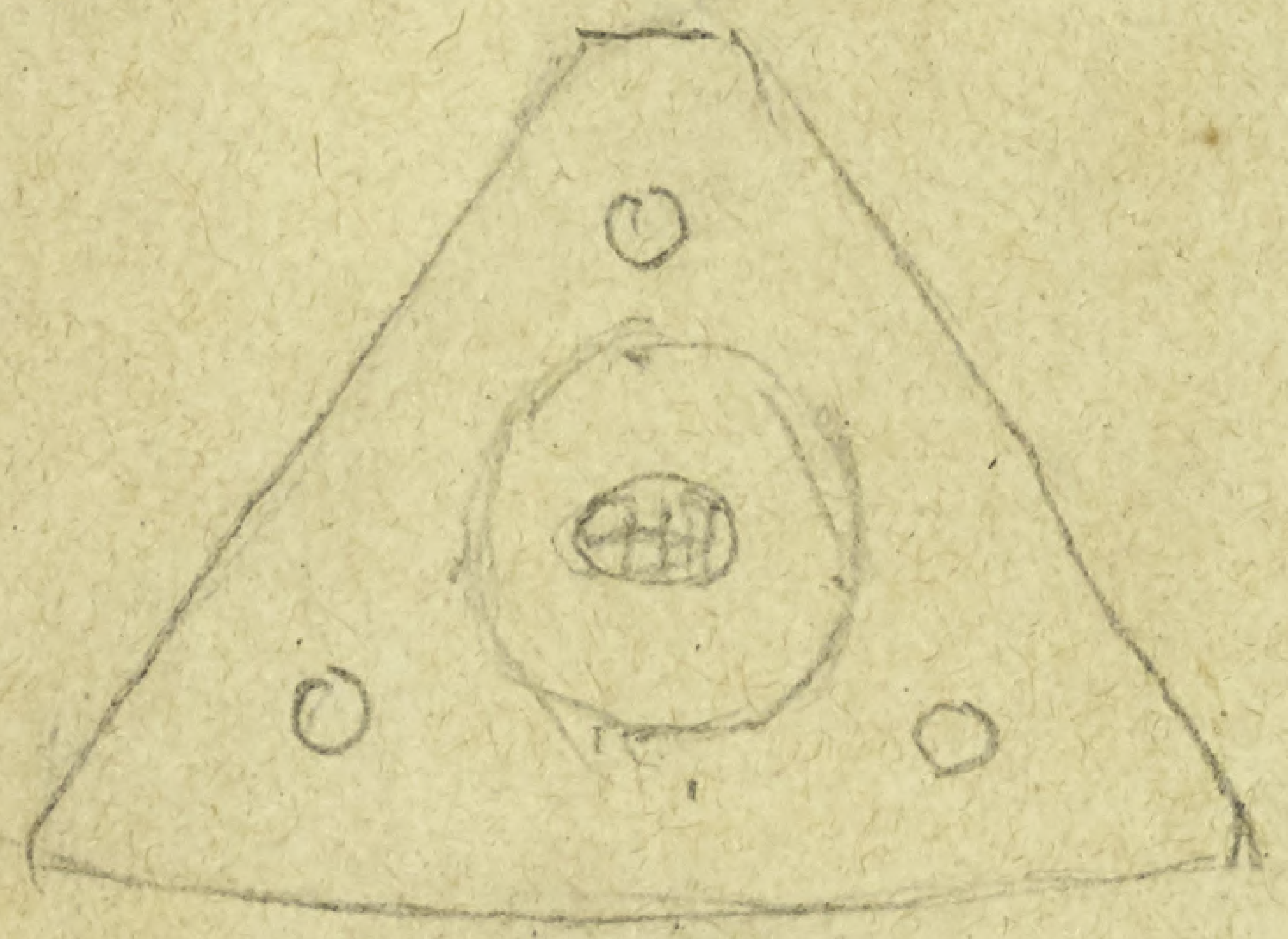
10434

Pinus Koraiensis Jan 15 1884

Hort Sargent Sept 1883

x30



I can discover no strengthening cells

x60

10435

ST. LOUIS, MO.

S. W. Corner of Second & Mulberry Streets,

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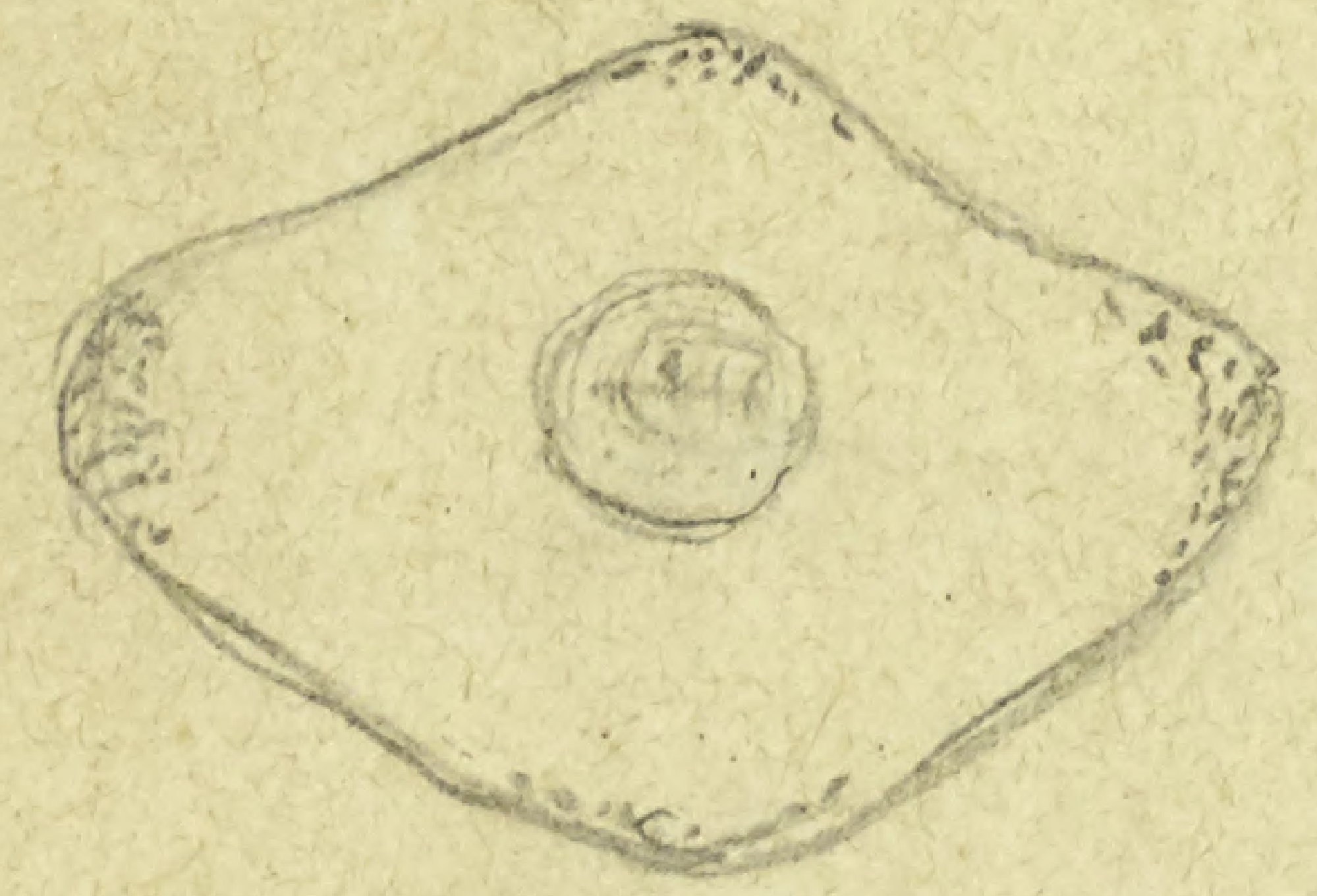
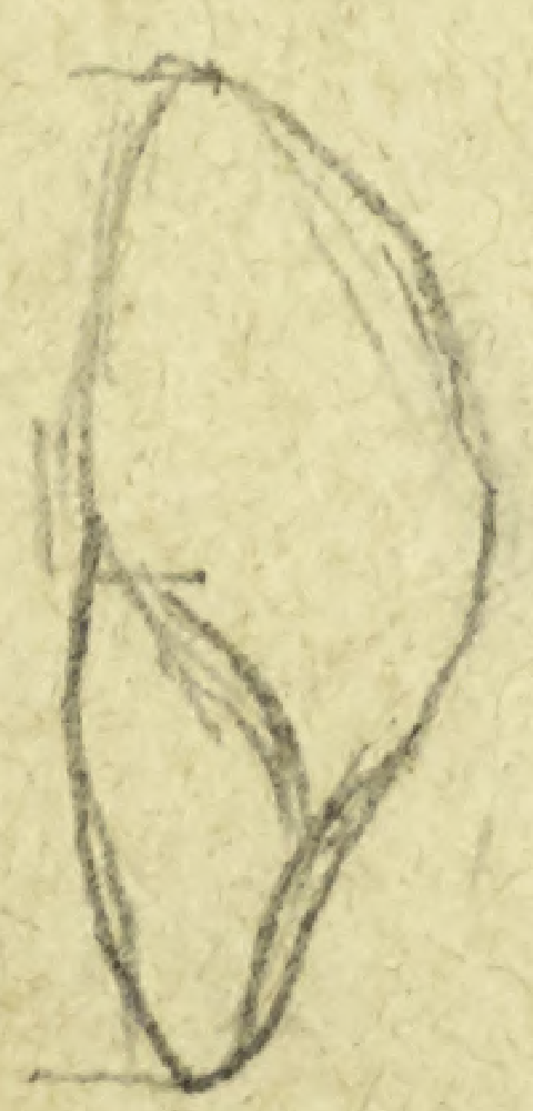
Larix occidentalis Jan 15 1884
Brandegee 1883

×30



no ducts
hypoderm in all 4 corners
and here and there a few
cells within sheath, mostly
indistinct

×2



wing tts long
as seed

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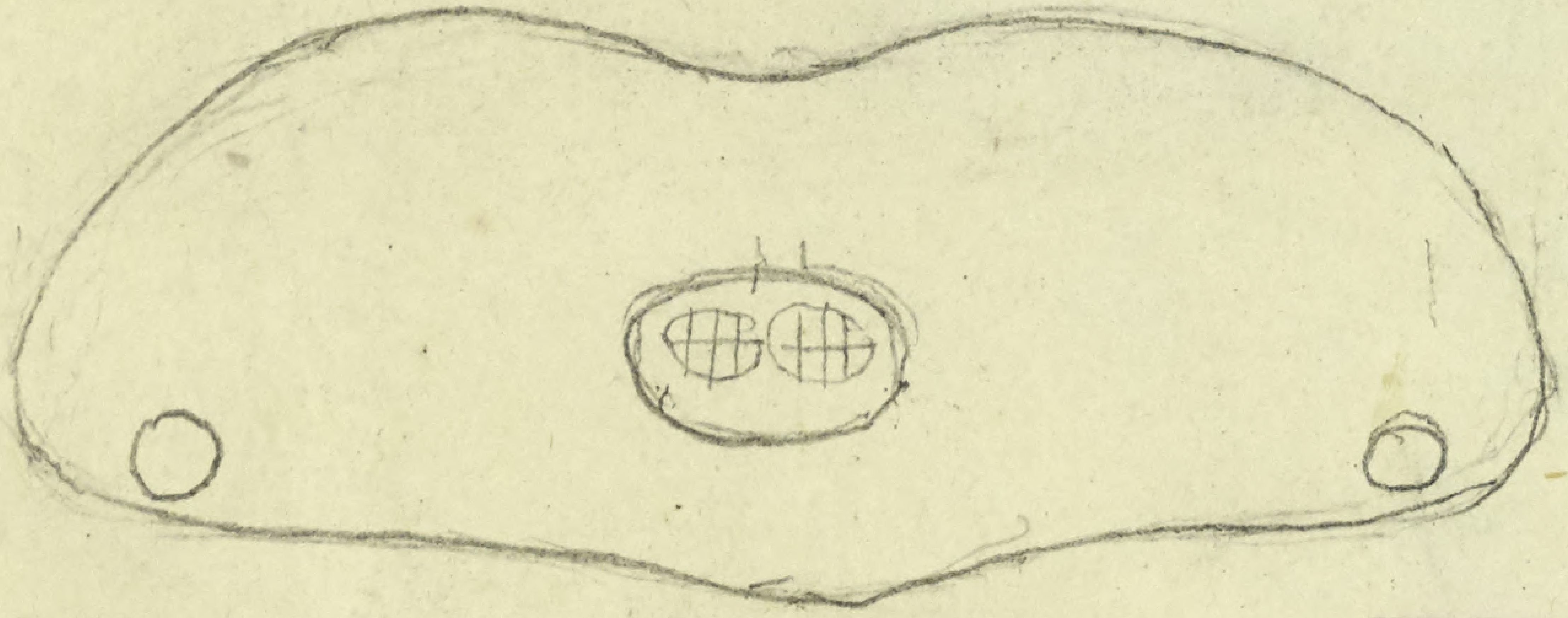
10436

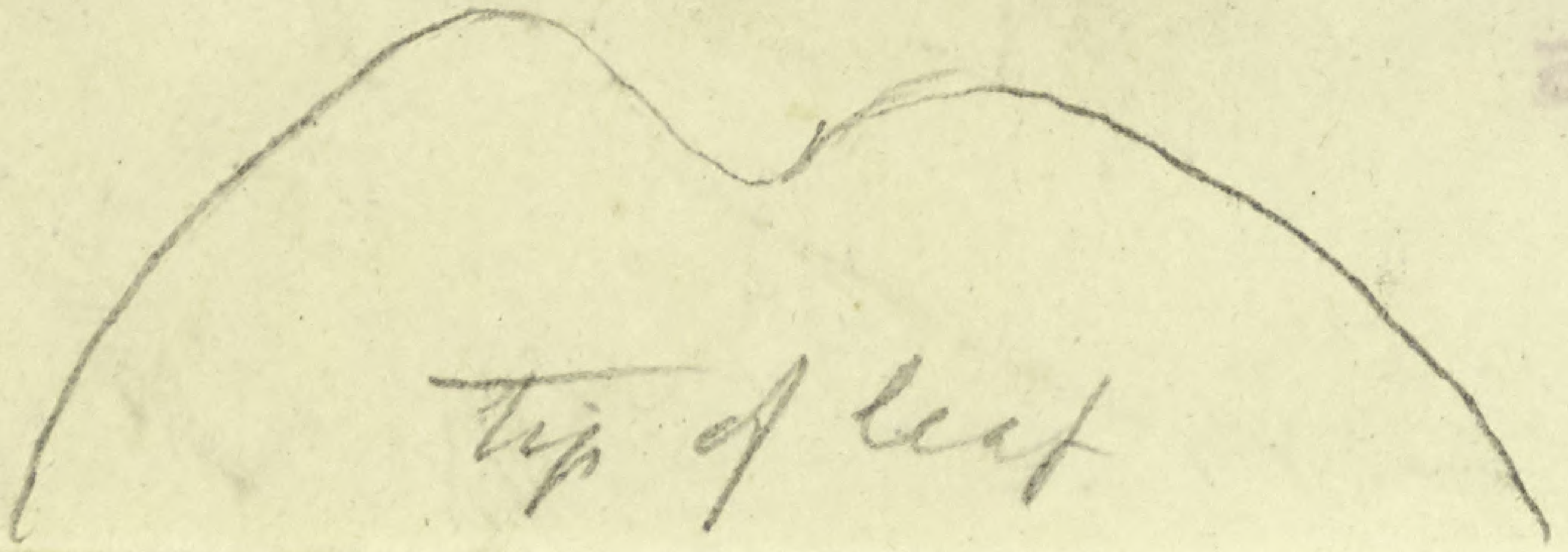
Abies Japonica Jan 14 1884

Bussey Arboretum, Sept 1883

× 30



no hypoderm
no stomata above
7–10 series on both sides below



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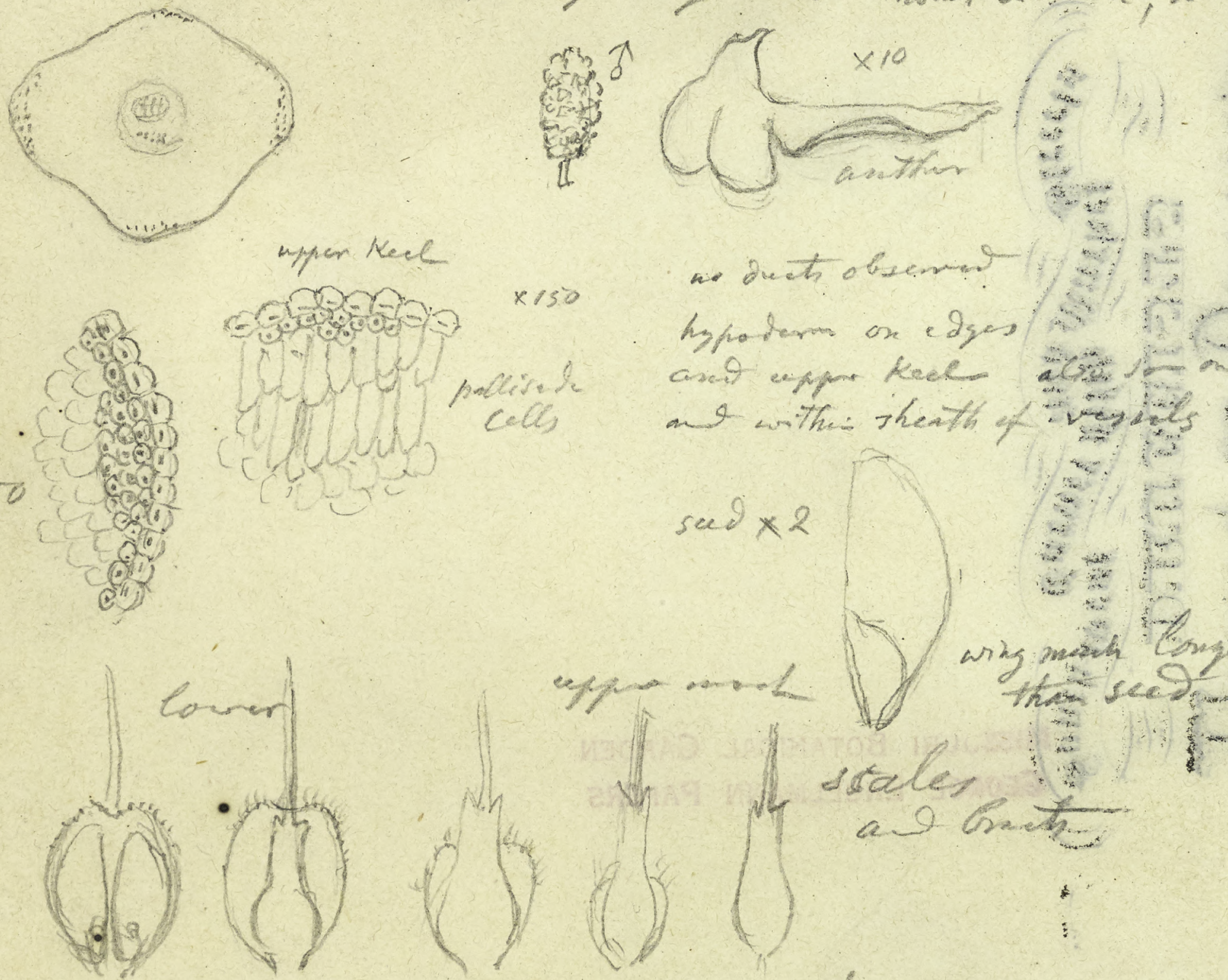
10437

Larix Lyallii

Jan 14 1884

Bradegee leg 1883 Mount Stewart, Washington Terr.



no ducts observed

hypoderm on edges and upper keel also so on lower and within sheath of vessels

wing mostly longer than seed

scales and bracts

scales emarginate, pilose-fimbriate

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10438

Leitch & Corlies
DRUGGISTS
South-west Corner Fifth and Market Streets

1/

Contributions to the Morphology ~~Study of the~~ of the
female flowers of Coniferae
announced the doctrine of the gymnospermous character of the Coniferae
Since the times of Robert Brown who first ~~brought light into~~
~~this question~~ 57 years ago the morphology of Conifer
flowers has been ably and intelligently discussed by
many distinguished
~~best morphologists~~ authorities ~~and~~ ~~without~~ and more so
within a year or two than before, without reaching as yet
a satisfactory solution. All morphologists are, I believe
now agreed that the male flower, formerly called an ament
(Linnaeus at one time called it also single flower) is really
single destitute of a proper calyx or corolla and
a flower ~~[illegible]~~ anthers arranged on a usually more or less elongated
axis. ~~The [illegible]~~ About this I have nothing new to add; I only repeat
in confirmation of this view, the statement in my paper on Pinus
(Transact IV. 167 & 168) ~~that~~ a ~~somewhat definite number of involucral~~
~~scales constituting a sort of a calyx~~ to this flower
~~the~~ in the genus Pinus at least even a calyx is not wanting, ~~as such~~
~~constituted by an~~ somewhat definite number of involucral scales;
~~the aggregation of~~
~~the female~~ flowers on the contrary were always considered
as ~~distinct~~ ~~consisting~~ an inflorescence consisting of single
flowers of curious structure, which eventually ~~for~~ matured into what is known as the Cone ×
× ~~Coniferae with single flowers~~ the inflorescence may of course be
without essentially changing its character nature of
reduced to a single flower, e.g. in Taxus,
study and
And the efforts of morphologists aimed at the explanation of the different
page 2
organs of the single flower. ‡ Lately, however, the view has obtained that
a greater unity harmony and in structure ~~would~~ between male
~~flow~~ recognized
and female organs would be ~~obtained~~, if we could prove this
~~supposed~~ inflorescence to be female
female also a single flower, analogous to the male
flower. Very specious and very seductive as this view is, the
(monstrosities)
abnormal development of female flowers and inflorescences of Conif
which it was my good fortune to be able to study form me and
scarcely
I can ~~not~~ doubt will induce all my readers to fall back on the
older doctrine of the female inflorescence.

10439.

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2 fig 2 shows the 4 inner carp. scales inside & above the shoot

The arrangement of the vascular bundles proves that the shoot is ~~central~~ embraced
originally (at base) between the lateral expansions of the carpel scale
~~not in the axil of the bract~~ and eventually becomes free from
the balance of the scale and is pushed in front of it, so that it
looks as if it was ~~originally~~ really axillary to both bract and scale (both
being essentially one organ according to the Sachs–Eichler theory.

But

F page 1

~~The history of~~ The different views enunciated by ~~and the~~ botanists have so
often been stated that a ~~repetition can here~~ ~~[illegible] scarcely~~ full history would only be a repetition and
expected here scarcely be). It may be stated, however, that
~~Rob. Brown~~ the ~~seedbearing~~ open scale, which bears the ovules and (in the
cone) the seeds, was considered by Rob Brown as a leaf (probably the ~~[illegible]~~
first leaf of an ~~[illegible]~~ undeveloped branchlet in the axil of the bract); ~~the~~
Alexander Braun suggested as early as 1842× that the scale is composed
of two leaves lateral to such a branchlet, ~~and connate~~ which bear
on their back the ovules

× Procès-verbaux du Congrès scientifique de France X sess.
à Strassburg Sept & Oct 1842, Tome I p. 171-172 as quoted
in A. Braun's Leben, Berlin 1882. p. 335 note

5/365
73

The ~~annexed~~ ~~table~~ diagram for the construction of which I am indebted to the tables.
Dr G. Hambach represents the principal results of these
The ~~the~~ perpendicular lines divide the year in periods of 5 days
each, while the horizontal ones mark the degrees ~~F~~. The central
full faced ~~line~~ curve indicates the mean temperature of the pent
hemeral periods of 47 years as actually found, and the dotted
line represent ~~[illegible]~~ the supposed real ~~corrected~~ mean temperature as given
in the last column of the tables; The uppermost curve ~~represe~~ shows the
highest temperatures found in those same pentahemeral periods in the same
number of years and the lower curve indicates the lowest temperatures
observed in those same periods. It will be noticed that the maximum and the ~~[illegible]~~
do not ~~follow~~ in the middle of the 5 periods, but on that one of the 5 days of the period
in which they actually occurred. 2

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10440

Morphology paper
as left

Morphology of Confervae
last sketches lying loose
on the table
1884

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A. C. de Sa e Albuquerque

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10442

A. Sachalensis

Bussey Arboretum
Sept 1883

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A brachyphylla
Herb Sargent
Septr 1883

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A Cephalonica

Hort Sargent
Sept 1883

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P. Koraiensis
Hort Sargent
1883

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Larix occidentalis

1883

Brandegee

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5 ahy

I. Lyall.

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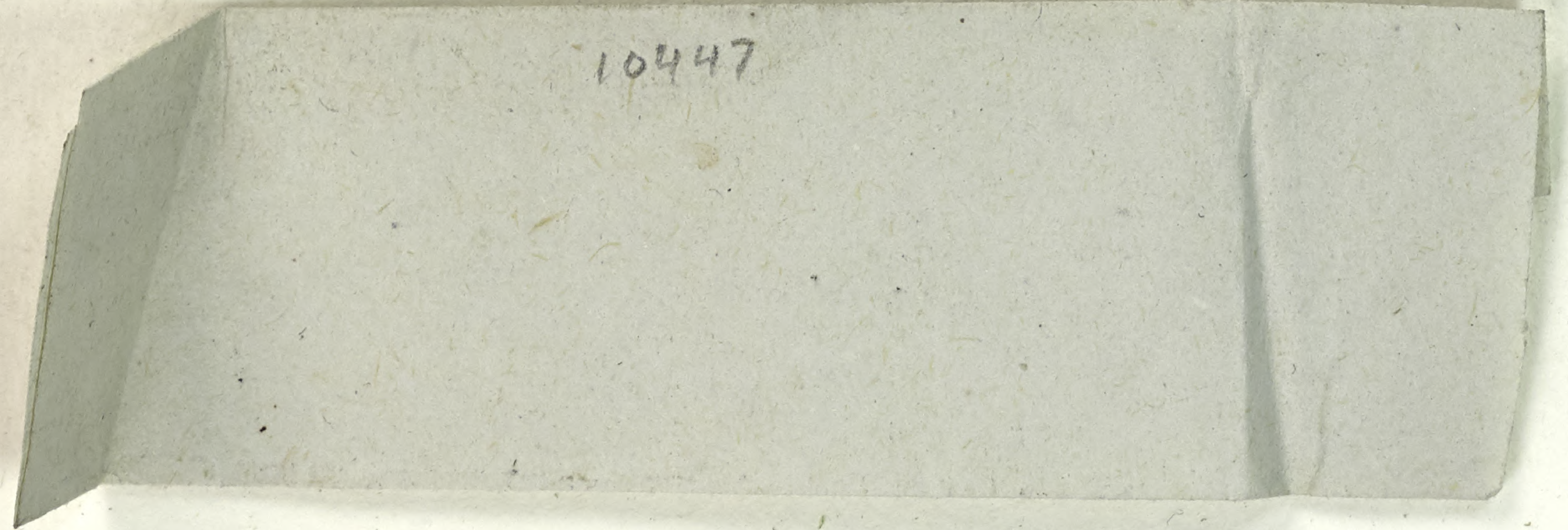

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Picea Alcoquiana

Hort Sargent
Sept 1883

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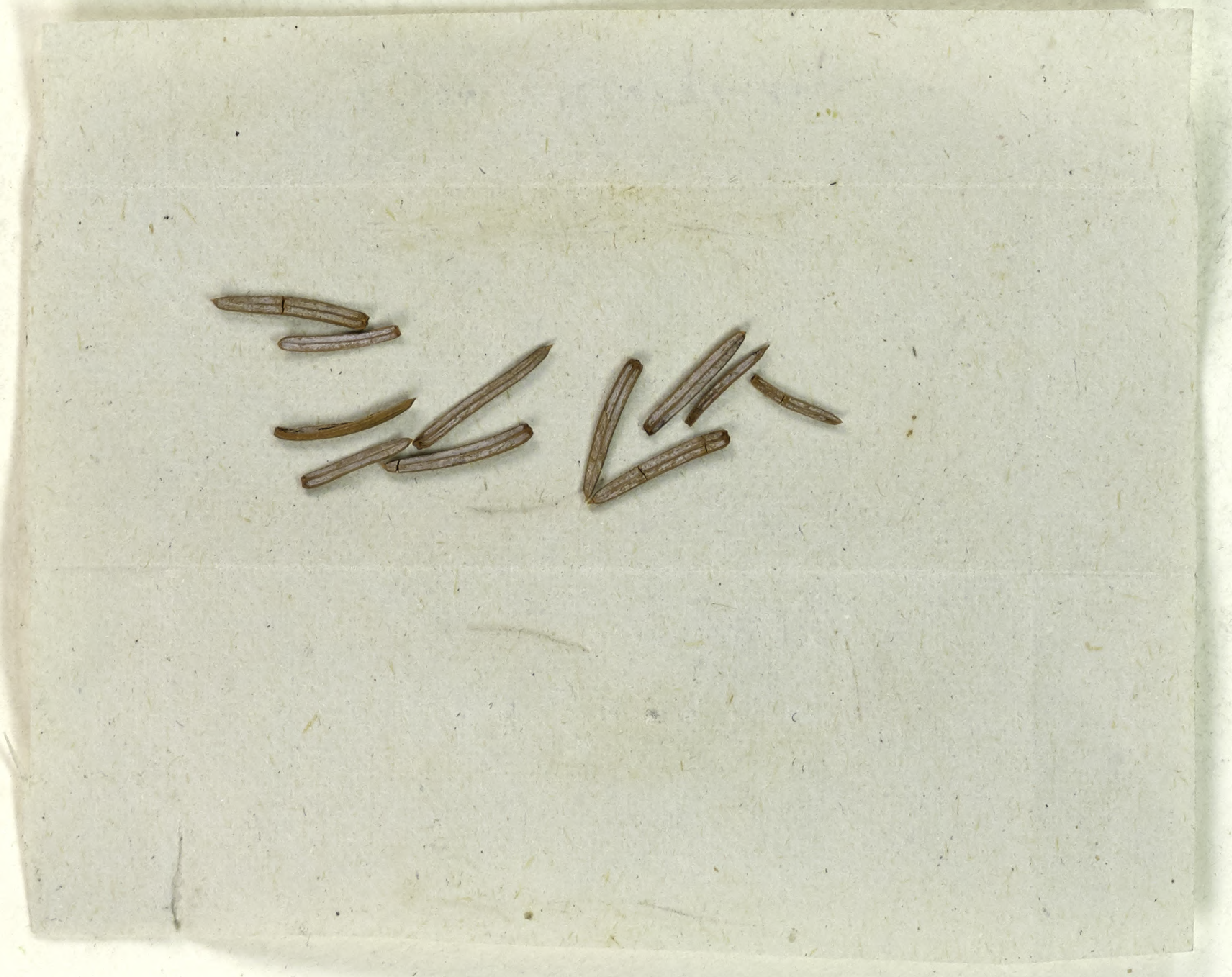

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"Abies Matsu"
Japan
"Jesso Spruce"
Bussey Arboret. Sept 1883

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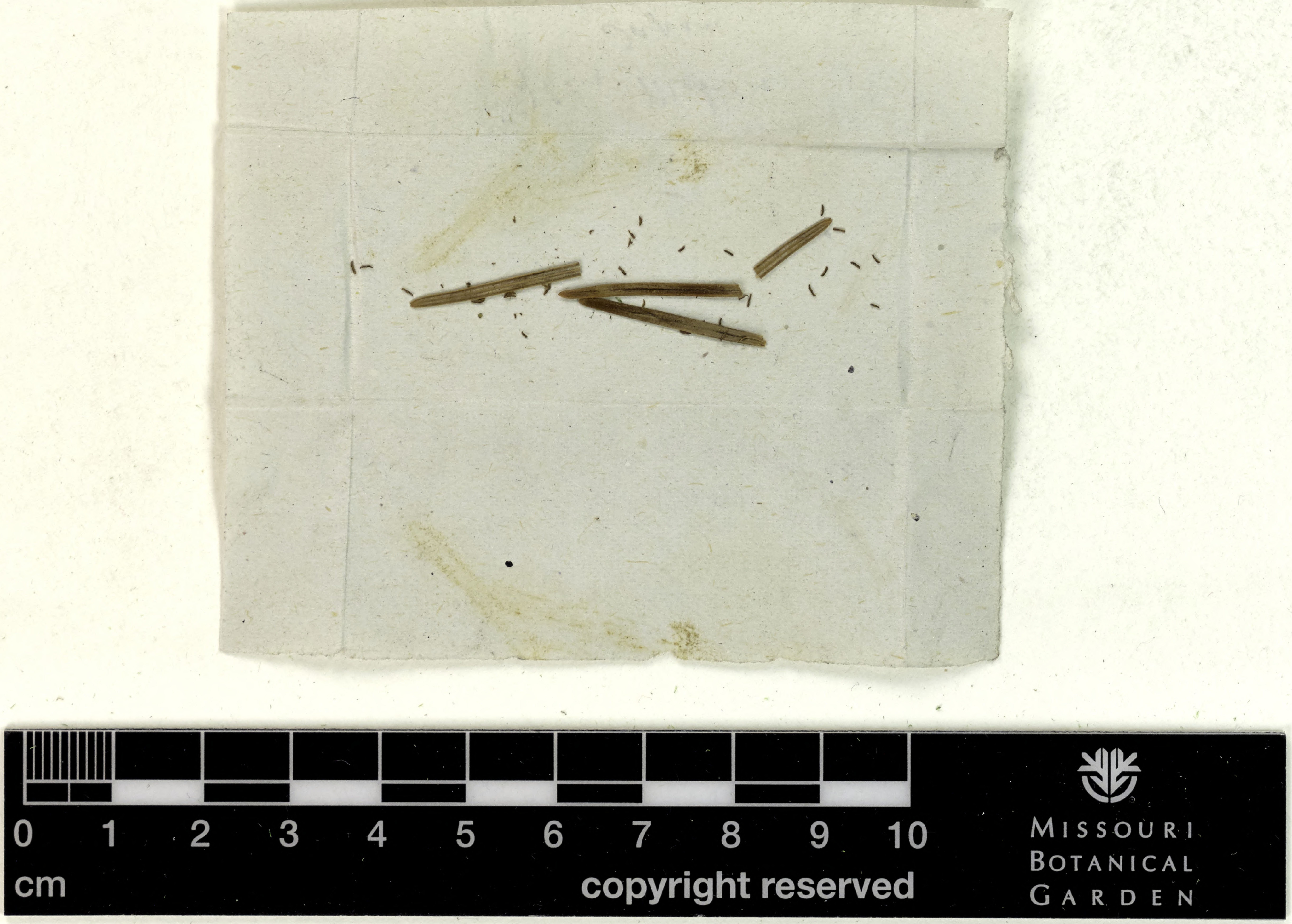
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Abies "brachyphylla"

Bussey Arboretum
Sept 1883

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Abies grandis
mountains

Krause leg
ex HG Berolin

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A. Japonica
Bussey arboretum
Sept 1883

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A Veitchii

Bussey Arboretum
Sept 1883

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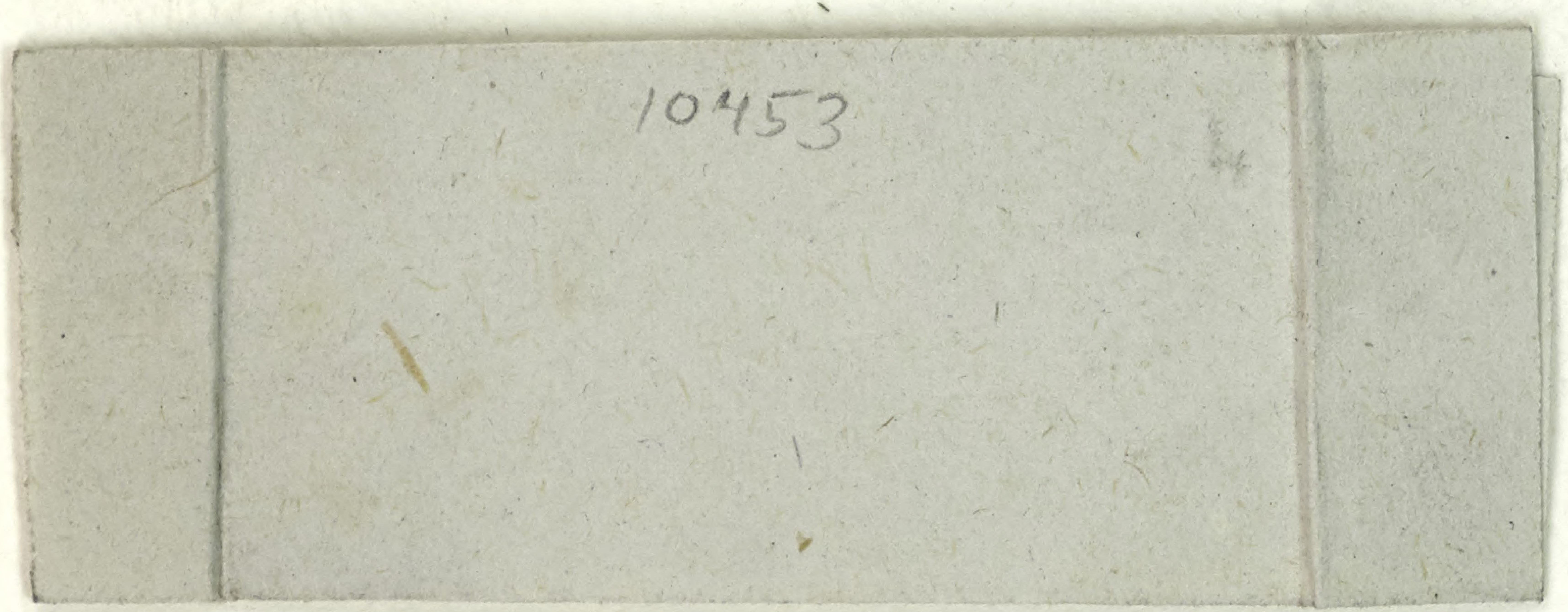

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Ran Lyallii

Bordighera

Sutton

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Revisio Abietinarum

Hort. reg. Berol., Link

Linnaea XX p. 283 1847

Corlies
GISTS
fth
nd Market
Streets

10455

St Louis Jan 1st 1863

Mr Wanns

to Dr Engelmann

to balance of medical bill for 1861	$ 36.50
to medical attendance on family in 1862	37. –
	$ 73.50

1862	Jan	5 Vis	7.50
	Feb	adv	1
	Mch	1 Vis.	1 50
	May	3 Vis	7
	Vaccin.		3
	Jun	3 Vis	6
	July	1 Vis	2 50
	Aug	adv.	1
	Nov	2 Vis.	5
	Dec	1 Vis	2 50

37.

Transition fr. involucral scale to Anther, see P. Cembra June 1863
P. Austriaca
P. Strobus (Frankfurt)

G. Offer Warsaw
8 Octob

10456

Greek and latin names of
Coniferae (Endlicher Synops.

Ρίτυς	Homer, Herodot	Pinus Pinea L.
Ἐλάτη	οὐρανομήκης Homer, Theophrast	Abies pectinata DC.
———	ἡ ἄῤῥην Theophrast	———
———	ἡ θήλεια Theophrast	Picea excelsa Link
Κέδρος	Theophr. Δαμ[illegible]η	Cedrus Libani Barrelier
Πίτυς	ἀγρία Theophrast	Pinus sylvestris L.
Πεύκη	Homer	Pinus Laricio Poir.
———	ἰδαῖα Theophr.	———
———	παραλίας Theoph.	Pinus maritima Lamb.

Pinus Plin	Pinus Pinea L
Abies Plin	Abies pectinata DC
Picea Plin	Picea excelsa Link
Larix Plin	Larix Europaea DC
Cedrus magna s. Cedrelate Plin	Cedrus Libani Barrel.
Taeda Plin.	Pinus sylvestris L
Pinaster Plin	Pinus Laricio Poir
Tibulus Plin	Pinus Halepensis Mill

over

10457

over

Κέδρος	Theophr.	Juniperus oxycedrus Lin.
Ἄρκευθος	Theophr. III. 12	" "
ἡ μικρὰ	Dioscorid.	" "
Κέδρος μικρὰ	Theophr.	Junip. communis Lin.
Βράθυ	Dioscorid.	Junip. Sabina L. J. Sabinoides Gris.
Κέδρος εὐκεάτοιος	Homer	J. phoenicea Lin.
Ἄρκευθος	Theophr. III. 6	
Θυιον	Homer	= ? Callitris quadrivalvis Vent.
Θυίον s. Θυία	Theophrast.?	— — — —
Κυπαρις		Cupressus sempervirens L.?
Μῖλος, ὁ	Theophr.	Taxus baccata L.
Σμίλαξ ἡ Τάξος	Galen. Dioscor.	— — —

Herba Sabina Plin	Junip. Sabina L
Herba Sabina Tamarici similis folio Plin	Junip. Sabinoides Gris
Cupressus mas et femina Plin	Cupressus sempervirens L.
Taxus Plin —	Taxus baccata L.

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